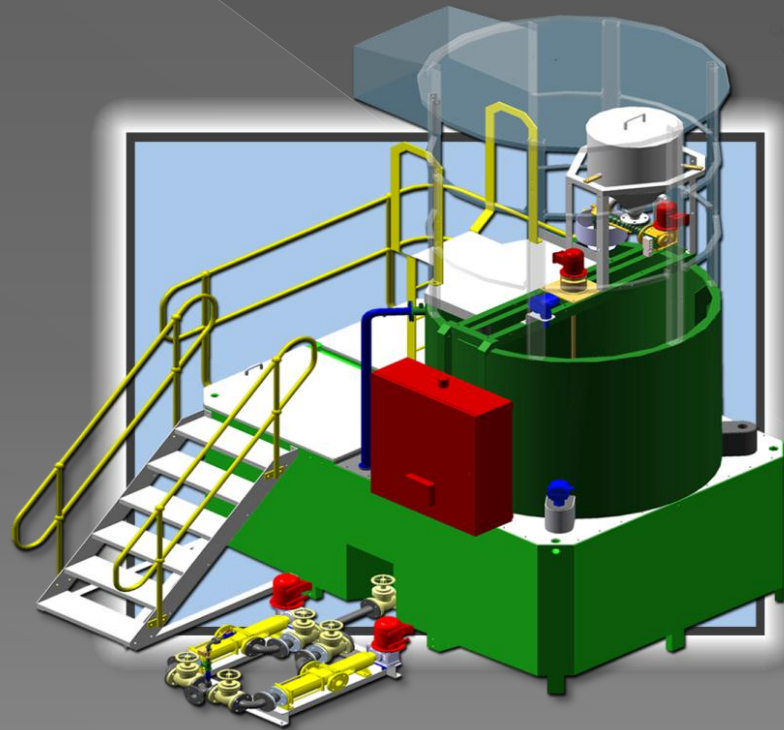


"Fully Automated Control Interfaced Flocculant Containment, Transfer, Wetting, Mixing, Hydration and Dosing Systems"



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Compact Flocculant Plants



Industrial Duty Compact Flocculant Plants





Sizing and Selection of a RESOURCES™ Flocculant Plant

- ❑ The quantity of flocculant required for delivery to the process per hour is used to determine the size/model of a RESOURCES™ Reagent Plant

- ❑ The dosage rate requirement is determined by:
 - Settling tests
 - Test work results provided by the reagent supplier
 - The Process Engineer's previous experience with the application



Flocculant Concentration Considerations

- ❑ Flocculants are able to be prepared at a range of concentrations
- ❑ RESOURCES™ Flocculant Plants are concentration flexible, usually configured to produce a concentration of 0.10%, a value typically recommended by most flocculant suppliers
- ❑ Flocculant can not be effectively made up at high concentrations because the chemical “uncoiling” of the flocculant molecule is inhibited by the lack of water able to reach it in order for chemical bonding to occur (hindered reaction kinetics)

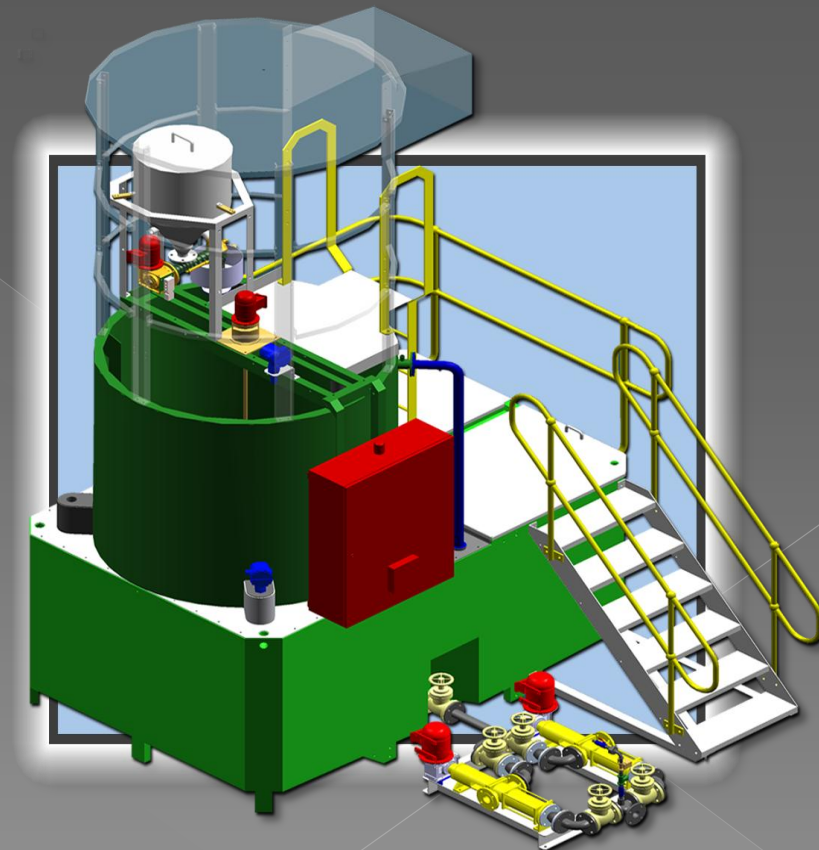
*"The Fully Automated Control Interfaced
Flocculant Containment, Transfer, Wetting,
Mixing, Hydration and Dosing System"*



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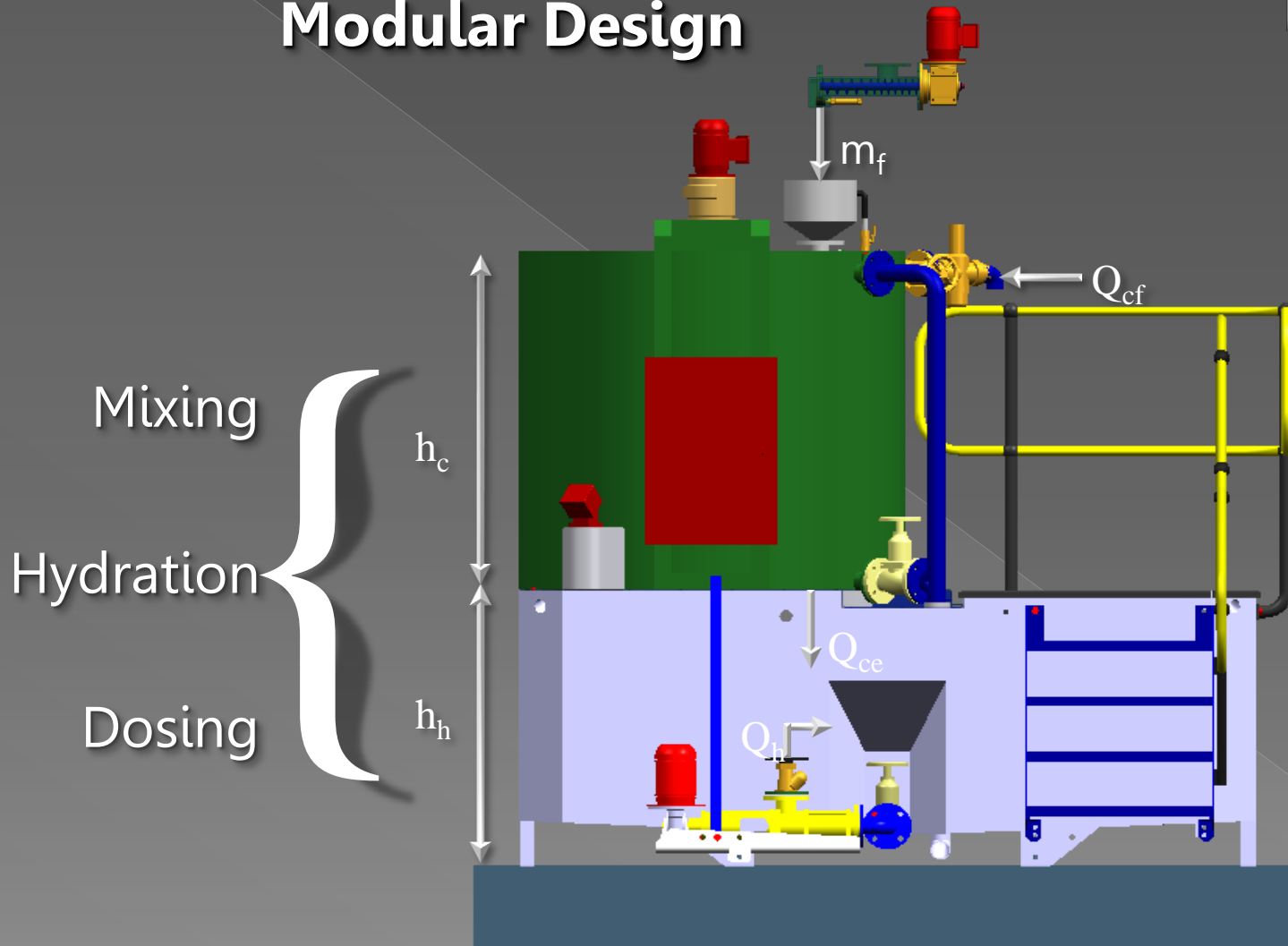
M-Series Compact Flocculant Plants

- **M-250 Model**
 - 230 to 575 liters/hour dosage rate
- **M-500 Model**
 - 535 to 1,335 liters/hour dosage rate
- **M-1000 Model**
 - 1,295 to 3,240 liters/hour dosage rate
- **M-2000 Model**
 - 3,150 to 6,000 liters/hour dosage rate

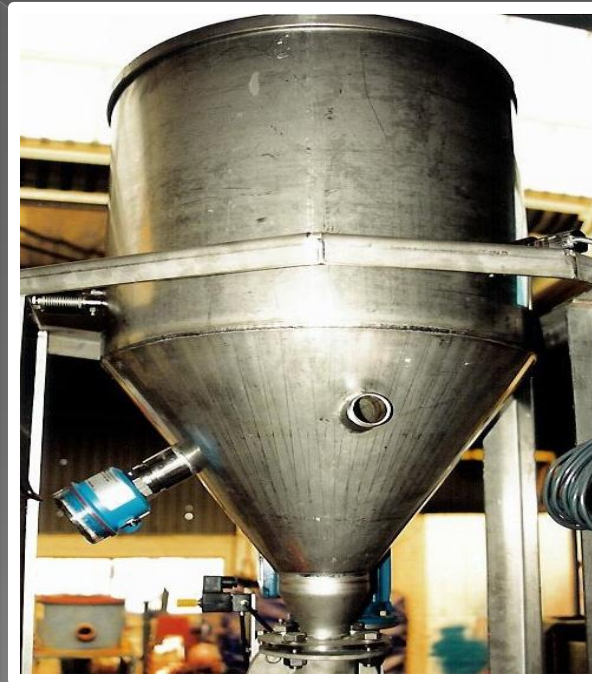
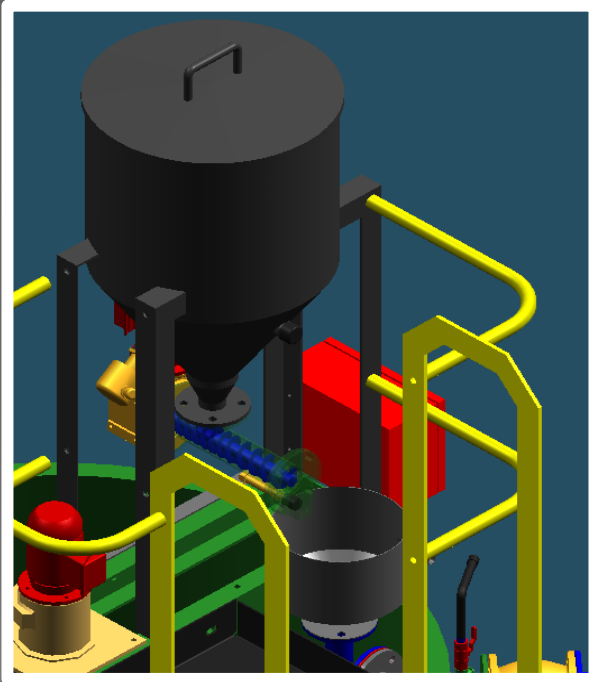




Modular Design

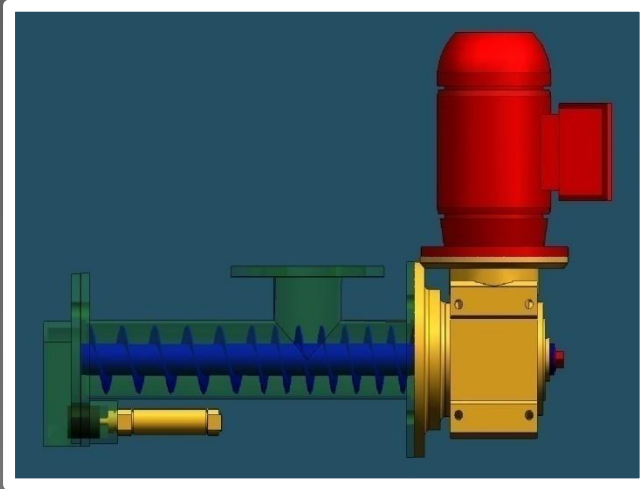


Steep Angled Hopper – “Containment”



Eliminates dry flocculant bridging and material flow hindrance. Inner surface of hopper is coated with specialized ultra low friction coating for smooth movement of dry material. Air inlet flange and fluidizing air piping is provided. Low-level detection is a standard supply. Load cell hopper mass detection can be supplied as an option.

Screw Feeder – “Transfer”



Proprietary Triple Pitch Stainless Steel Screw Feeder, including pneumatically actuated shut off gate for prevention of moisture ingress into screw feeder.

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High Capacity Flocculant Plant Features



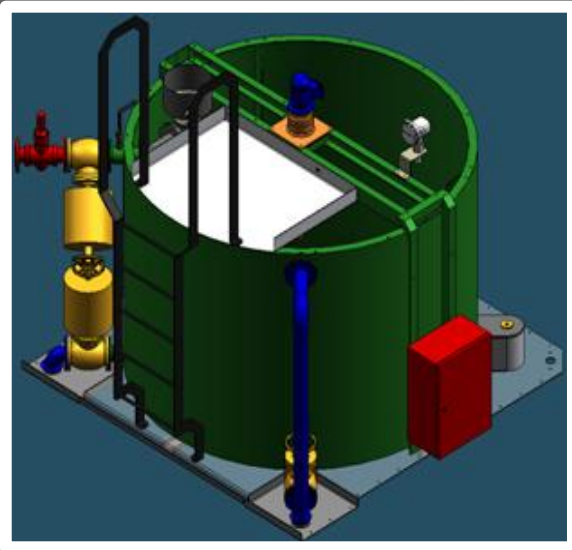
High Energy Pump Hydrator – “Wetting”



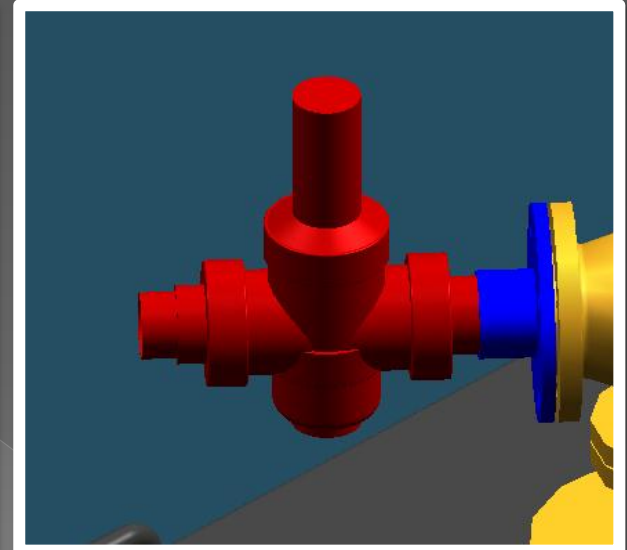
The RESOURCES™ proprietary High Energy Pump Hydrator ensures an even and complete water coating of the individual reagent particles, eliminating clotting. The water pressurized annular ring creates an even water curtain over the entire hydrator surface with no dry areas. A high energy pump then transfers the initially wetted reagent to the mixing tank.



Mixing Tank – “Mixing”



Baffled, mechanically agitated mixing tank (no air agitation)



Water pressure regulator



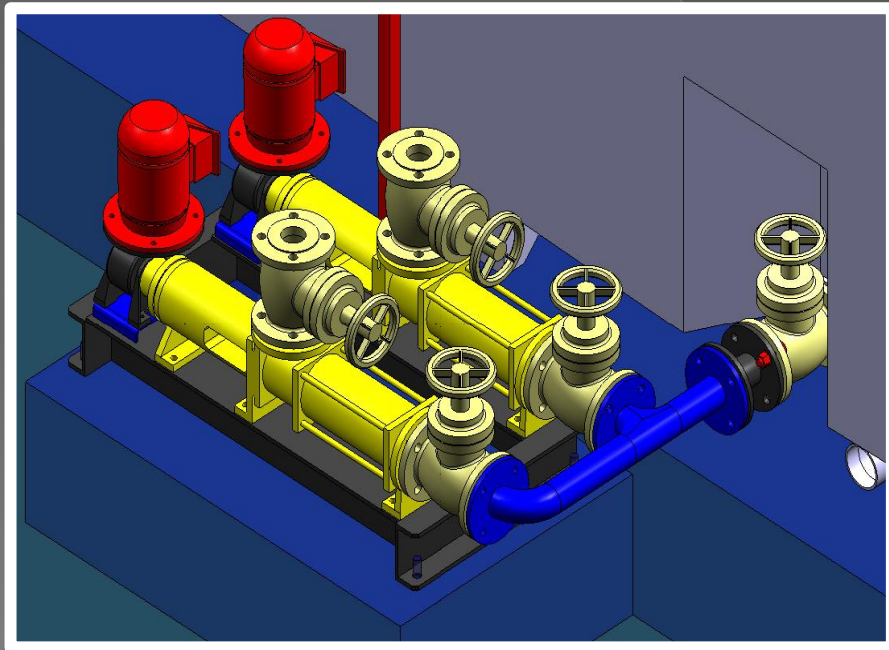
Conditioning Tank – “Hydration”



→ Baffle Design

Conditioning tank for final hydration including a corrugated baffle to prevent short-circuiting

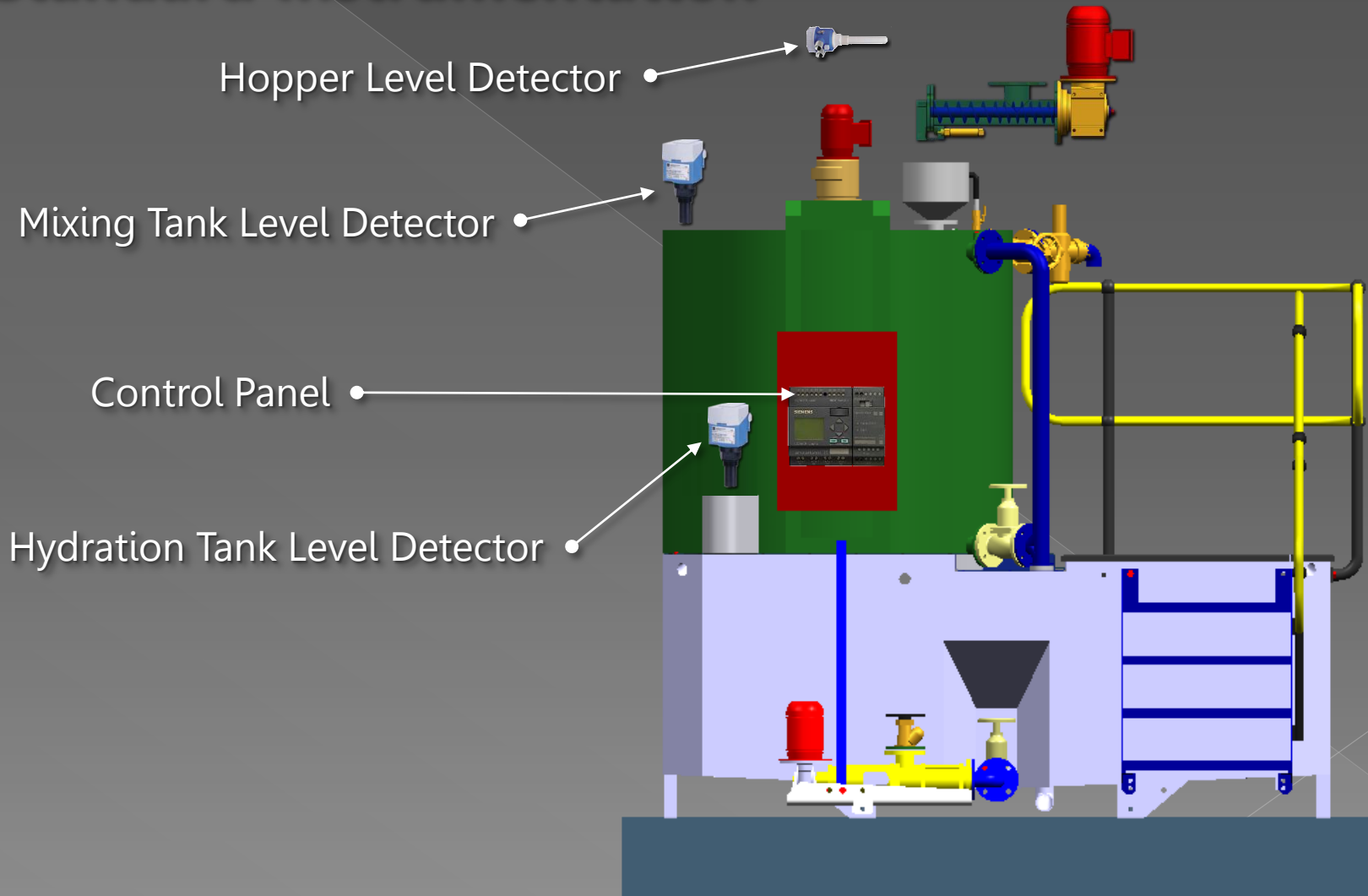
Pump Assembly – “Dosing”



Dosing pump-mounting base, all valves, flanges and internal connecting piping



Standard Instrumentation



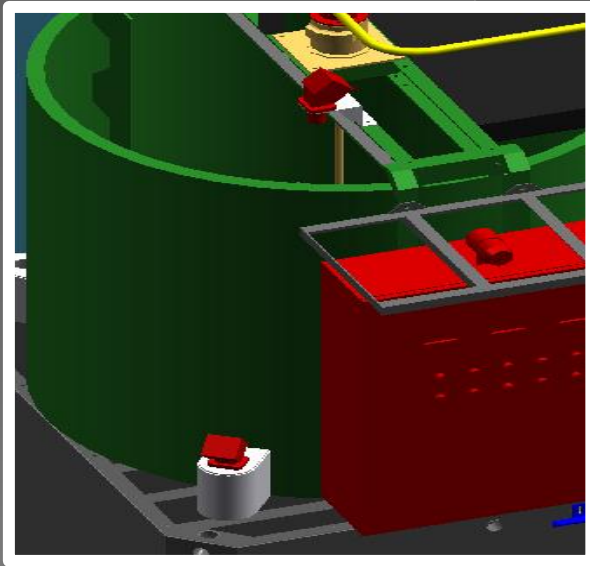
Hopper Level Detector

Mixing Tank Level Detector

Control Panel

Hydration Tank Level Detector

Control Interface Components – “Communications”



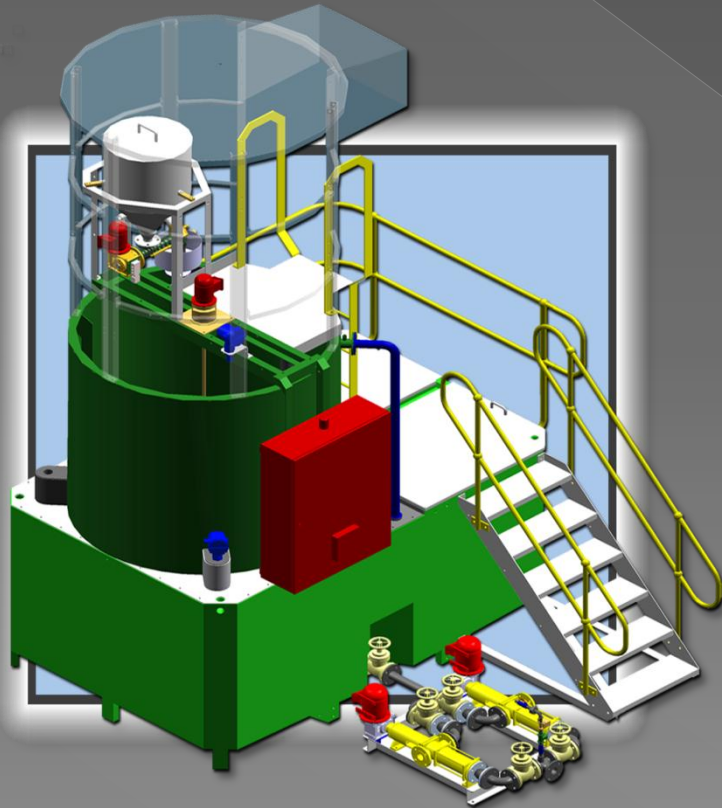
Control panel with PLC and integral cable racking

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M-Series Compact Flocculant Plant Features



Walkways and Hand Railings – “Accessibility”



Sturdy galvanized walkway with hand railings and stairway

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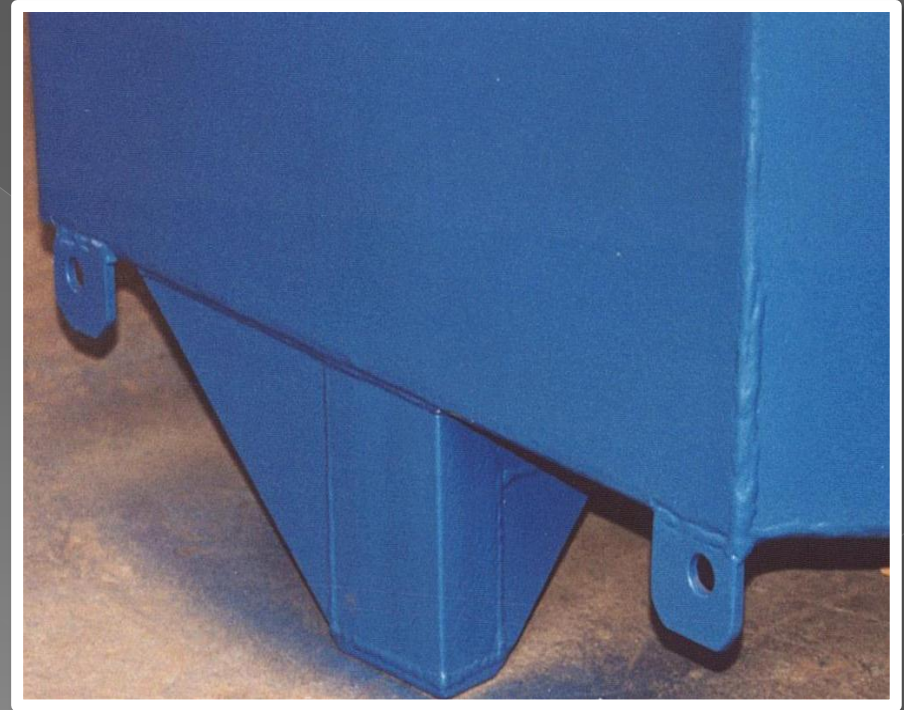
M-Series Compact Flocculant Plant Features



Recessed Flanges & Secure Stub Legs – “Innovation”



Recessed outlet flanges allow easy transport and handling



Stub legs provided for positioning and securing to a standard concrete slab

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M-Series Compact Flocculant Plant Features



M-1000 Flocculant Plant Fully Assembled



Plant fully assembled and tested ready for delivery

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M-Series Compact Flocculant Plant Features



M-2000 Mild Steel Flocculant Plant



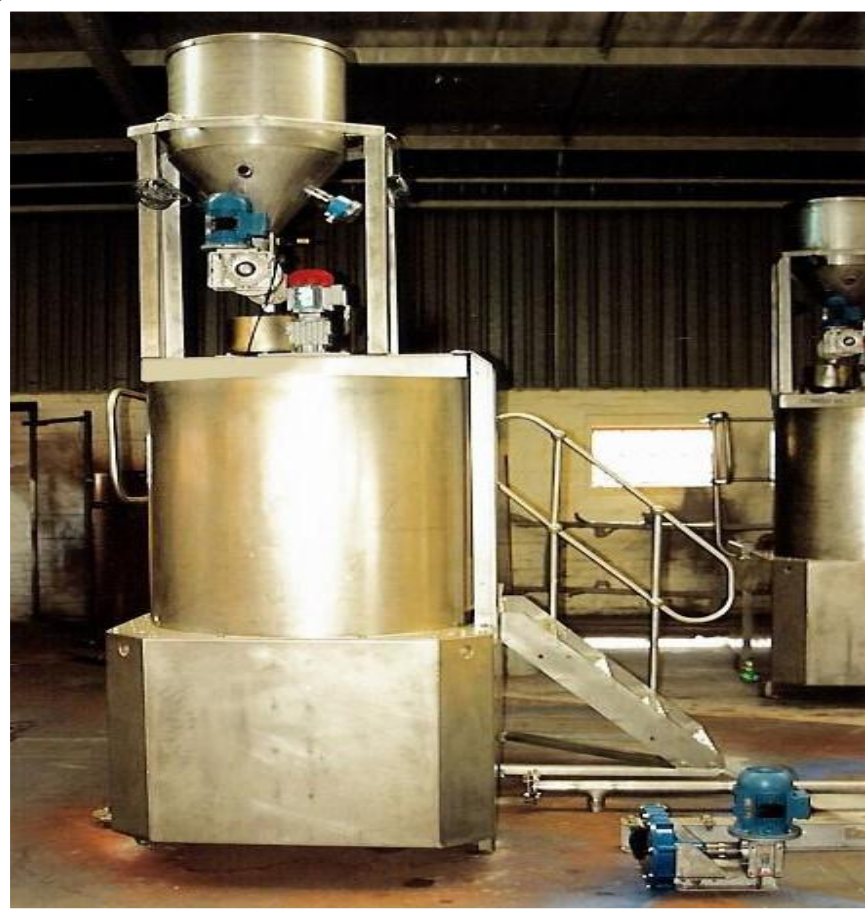
Plant fully assembled and tested prior to delivery

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M-Series Compact Flocculant Plant Features



M-250 Stainless Steel Flocculant Plant



Plant fully assembled and tested ready for delivery



BENEFITS OF A RESOURCES™ FLOCCULANT PLANT

- ❑ **Very high process availability = No loss of production = Money saved**

A RESOURCES™ Flocculant Plant is designed for maximum operational availability. Emergency operational capability integral to the high capacity C-Series models ensure no production loss even if a sequence tank has to be taken offline for maintenance

- ❑ **Optimal thickener performance = Money saved**

A RESOURCES™ Flocculant Plant ensures the thickener/s always receive properly hydrated flocculant at maximum activity levels. This guarantees that the thickener control philosophy implemented will not be compromised by poorly prepared flocculant. Our unique and proprietary design and integral components were created by top RESOURCES™ Process Engineers *for Process Engineers* who understand what it takes to keep a processing plant functioning smoothly and efficiently



BENEFITS OF A RESOURCES™ FLOCCULANT PLANT

❑ **Minimal flocculant loss or wastage = Money Saved**

Water recovery operations using thickeners often tend to lose or waste costly flocculant due to the use of inefficient, ill-equipped or make-shift flocculant plants. This loss over time can amount to hundreds of thousands of dollars. Typically this loss is several times the capital cost of the reagent plant. A RESOURCES™ Flocculant Plant can pay for itself many times over in the first year of operation

❑ **Flocculant type versatility = Money Saved**

A RESOURCES™ Flocculant Plant can accommodate any type of flocculant as well as any practical flocculant concentration.

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Industrial Duty Flocculant Plants



Resources Flocculant Plants

"A RESOURCES™ Flocculant Plant is critical to every water recovery operation. RESOURCES™ is setting a new quality and efficiency standard in the mineral processing industry."

THE COMPLETE SOLUTION

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Industrial Duty Flocculant Plants



WEBSITE & PRODUCT CATALOGS

- ❑ The RESOURCES™ Water Technology Website can be viewed at: www.resourceswatertechnology.com
- ❑ The RESOURCES™ Compact Flocculant Plant Brochure can be downloaded from our website